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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,978	10/28/2003	Kia Silverbrook	ZG006US	6497
24011	7590	03/29/2006	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, NSW 2041 AUSTRALIA			TRAN, BINH X	
			ART UNIT	PAPER NUMBER
			1765	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,978

Applicant(s)

SILVERBROOK, KIA

Examiner

Binh X. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10-24-2005 has been entered.

Priority

2. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Australia on 7-15-1997. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

Petition

3. The applicants filed a petition on 09-19-2005 to accept an unintentionally delayed claim under 35 USC 120 for the benefit of the prior filed applications. The petition was dismissed by the Office of Petitions (See Petition Decision mailed on 03-16-2006).

Response to Amendment

4. The amendment filed 9-19-2005 is objected to under 37 CFR 1.78. The added material is improper and ineffective as follow:

In the original application filed on 10-28-2003, applicants only claim that this application (10/693,978) is a continuation of 10/302,606 filed 11-23-2002, now US 6,644,767. However, in the amendment to the specification filed on 9-19-2005, applicants try to claim the additional priority of application No. 09/855,094 filed May 14, 2001, now US 6,485,123, which is a continuation-in-part of application No. 09/112,815 filed on July 10, 1998, now US 6,247,792. This claiming benefit of earlier filing date and cross-references to other applications is improper and ineffective under 37 CFR 1.78 (a) (2) (ii). According to the 37 CFR 1.78 (a) (2) (ii) "This reference [i.e. cross reference to other application] must be submitted during the pendency of the later-filed application. If the later-filed application is an application filed under 35 U.S.C. 111(a), this reference must also be submitted within the later of four months from the actual filing date of the later-filed application or sixteen months from the filing date of the prior-filed application". Since the claiming benefit of earlier filing date and cross-reference to other application is improper and ineffective, the examiner will consider the priority date of this application (10/693,978) is 11-23-2002 base on the application No. 10/302,606 in which the applicants original claiming the benefit of priority date. Further, the petition filed on 09-19-2005 to overcome unintentionally delayed claim under 35 USC 120 for the benefit of the prior filed applications has been dismissed by the office of Petition.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook (US 6,247,792).

Respect to claim 1, Silverbrook disclose a method for making a ink jet print head chip, the printhead chip having a substrate that incorporates drive circuitry layers (CMOS circuitry, col. 5 lines 50-55), a plurality of nozzle arrangements, each nozzle arrangement (10) having nozzle chamber walls that define a nozzle chamber, an ink ejection port (30) in fluid communication with the nozzle chamber, a plurality of ink supply channels (36) defined through the substrate to be in fluid communication with respective nozzle chamber (col. 6 lines 13-23), and an actuator (35) secured at one end, the method comprising the steps of:

depositing a layer of a sacrificial material (50) on the substrate that incorporates drive circuitry layers positioned on a wafer substrate (12) (col. 7 lines 31-45, Fig 5-6);

etching the layer of sacrificial material (50) to define deposition zones (51) for the actuators (col. 7 lines 48-50, Fig 7);

depositing a first layer of thermally expandable actuator material (52) on the deposition zones (51) (col. 7 lines 50-51);

etching the first layer of actuator material (52) and the drive circuitry layers to define deposition zones for a conductive material of the actuators and for vias for heating circuits of the actuators (col. 7 lines 52-55, Fig 8);

depositing a layer of a conductive material (53) on the first layer of the actuator material (52) (col. 7 lines 55-58);

etching the layer of conductive layer material (53) to define a heating circuit for each actuator (col. 7 lines 59-60, Fig 9);

depositing a second layer of actuator material (54) on the layer of conductive material (53) so that the heating circuit is embedded in the actuator material (col. 7 lines 61, fig 10);

etching the second actuator material to define the actuators and the closure member (col. 7 lines 62-64);

forming the nozzle chamber walls (28) with a suitable deposition and subsequent etching technique (col. 8 lines 1-5, fig 11);

etching away the sacrificial layer to free each actuator and closure member (col. 8 lines 20-23);

etching the ink channel through the substrate so that each ink channel in fluid communication with a respective nozzle chamber (col. 8 lines 15-20, Fig 14).

Respect to claim 2, Silverbrook teaches the actuator (35) is shaped so that in a rest condition, the actuator enclosed an arc; when the actuator material is heated, different thermal expansion of the actuator material causes the actuator (35) to straighten at least partially and subsequent cooling of the actuator causes the actuator return to its rest condition, thereby displacing the closure member between the closed and opened position (Fig 2, col. 6 lines 1-60).

Respect to claim 3, Silverbrook disclose that the actuator material is etched so that each closure member is positioned to close a respective ink inlet channel in its closed condition and to open to the ink inlet channel in its open position (fig 15-16).

Respect to claim 4, Silverbrook discloses each heating circuit includes a heater (23) positioned proximate an inside edge of the conductive material and return to trace positioned outwardly of the heater, so that an inside region of the actuator material is heated to a greater extent than the remainder of the actuator material (col. 6 lines 25-41). Respect to claim 5, Silverbrook teaches a serpentine length of conductive material (copper) material defines each heater (col. 6 lines 25-28). Respect to claim 6, Silverbrook discloses depositing the first and second layer of actuator material include depositing first and second layer of polytetrafluoroethylene; and depositing the conductive material includes depositing copper (PTFE, col. 7 lines 50-52, 59-60, col. 6 lines 24-29). Respect to claim 7, Silverbrook discloses the actuator defines a coil that partially uncoils when the actuator materials (PTFE) undergoes differential thermal expansion (col. 6 lines 25-44). Respect to claim 8, Silverbrook discloses the chamber walls (28) are fabricated so that the actuators and the closure are each positioned within respective nozzle chambers (Fig 15-16).

Response to Arguments

7. The applicant amendment with respect to claims 1-3 and 7 is sufficient to overcome the examiner's previous 35 USC 112 2nd paragraph rejection. Thus, the examiner withdraws the 35 USC 112 2nd paragraph rejections in this office action.

8. Respect to the 35 USC 102(b) rejections as anticipated by Silverbrook US 6,247,792, the applicants argue, "US 6,247,792 stands on the priority line of the present application. Thus, conditional upon the granting of the co-filed petition, the examiner's rejection of the claims on the basis of the '792 patent will have to be withdrawn". The

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examiner disagrees. It is noted that the co-filed petition for the priority was dismissed (See petition decision mailed on 3-16-2006 for further detail). Since the petition for the priority was dismissed, the examiner still maintains that the US 6,247,792 is a proper prior art under 35 USC 102(b).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571) 272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh Tran

Binh X. Tran